



**US Army Corps  
of Engineers**

Rock Island District

# PUBLIC NOTICE

Applicant: Metro Waste Authority

Date: October 21, 2004

Expires: November 19, 2004

CEMVR-OD-P-2002-141

Section: 404

---

**Joint Public Notice  
US Army Corps of Engineers  
Iowa Department of Natural Resources**

1. Applicant. Metro Waste Authority, 300 East Locust, Suite 100, Des Moines, Iowa 50309.
2. Agent: Barker Lemar Engineering Consultants, 1801 Industrial Circle, West Des Moines, Iowa 50265.
3. Project Location. Metro Park East Landfill, Sections 1 and 2, Township 78 North, Range 22 West, near Mitchellville, Polk County, Iowa.
4. Project Description. The Metro Park East Landfill proposes to expand into the Phase 3 Borrow Area. The purpose of this project is to expand the existing landfill operations and to provide compensatory mitigation for the loss of jurisdictional wetlands.

a. The Phase 3 Borrow Area is approximately 86 acres located immediately southeast of the existing landfill operation. This area was part of a farm and includes upland cropland and grassland, a farm pond, and a small stream. The Corps of Engineers Regulatory Branch performed the wetland delineation. Barker Lemar then surveyed and plotted the wetlands.

(1) The farm pond has over time become nearly filled with silt from cropland soil erosion. A shallow water area remains in the center. The remainder of the pond area is saturated supporting herbaceous and grass wetland plants. Dominant wetland plants include Broadleaf Arrow-Heads (*Sagittaria latifolia*) (OBL), Rice Cutgrass (*Leersia Oryzoides*) (OBL), Swamp Smartweed (*Polygonum amphibium* var. *cocciceum*) (OBL), and Nodding Beggar-Ticks (*Bidens cernua*) (OBL). The National Wetland Inventory classifies the pond as Palustrine, diked. The earthen dam is severely undermined at the spillway pipe. The spillway pipe outlets into a small stream which flows to Camp Creek.

(2) The National Wetland Inventory classifies the stream channel as Palustrine, Emergent, Seasonally Flooded. The channel lies in a moderately steep wooded ravine. Much of the stream channel has become deeply incised due to downcutting erosion. The incised channel remains wet most of the year. Wetland plants occur on those parts of the ravine bottom, and on silt deposits, that have not been effected by the channel downcutting. Much of the wetland hydrology is subsurface seepage from the pond and from the slopes along the ravine. Dominant wetland vegetation includes Sedges (*Carex*) (FACW to OBL), Reed Canarygrass (*Phalaris arundinacea*) (FACW+), Rice Cutgrass (*Leersia oryzoides*) (FACW), Clearweed (*Pilea pumila*) (FACW), and Stick Tight Beggar-Ticks (*Bidens frondosa*) (FACW). The total area of wetlands complex is approximately 1.25 acres. Trees that dominate the ravine include Black Willow (*Salix nigra*) (OBL), Black Walnut (*Juglans nigra*) (FACU), American Elm (*Ulmus Americana*) (FACW-), Common Choke Cherry (*Prunus virginiana*) (FAC-), Silky Dogwood (*Cornus amomum*) (FACW+), American Plum (*Prunus americana*) (NI), and Black Cherry (*Prunus serotina*) (FACU). 45% of the tree and shrub species are wetland indicator species. Therefore, higher deposition areas and sideslopes in the ravine were determined as non-wetland. Deeply incised portions of the stream were not included in the impact measurements since these parts of the stream provide little or no aquatic habitat value. Removal of the pond and stream area will not occur until completion of the compensatory mitigation work.

b. The Compensatory Mitigation Site is in the southwest corner of the property, on the west side of Camp Creek. The site is owned by the Metro Park East Landfill. The eastern half of the mitigation site is within an existing Natural Resources Conservation Service (NRCS) conservation easement area. Two wetlands were constructed in the easement area in 2003 by the NRCS. The NRCS have made no plans to construct wetland in the area that is now the mitigation site. Therefore, the Corps determined that the compensatory mitigation site, including that part in the NRCS conservation

easement area, is acceptable for use as wetland mitigation. This project will enhance wetland development in the easement area, and outside the easement area, without the use of Federal funds.

(1) Wetland Construction. A shallow water wetland structure will be constructed along the west end of the easement area. The drainage area is approximately 143.0 acres. Construction will be performed in accordance with NRCS specifications. Topsoil will be stripped and stockpiled to be used after construction to line the created wetland areas. The topsoil lining will be 12 to 18 inches thick. Any topsoil containing Reed Canarygrass will not be used. Erosion control measures will be used during construction to include silt fences, temporary cover crops, or temporary sedimentation basins. The structure will be constructed 4 feet high to elevation 814.0 feet. The top of the dam will be 12 feet wide. The sideslopes of the structure will be no steeper than 4 (horizontal) to 1 (vertical). The primary spillway will be 12-inch diameter corrugated metal pipe with a flash board riser used to maintain the desired volume of water in the wetland. The top of riser will be at elevation 813.0 feet. An island will be constructed within the pool area to elevation 814.0 feet. The permanent pool will be maintained at or below elevation 813.0 feet. Slow discharge from the primary spillway will outlet into a depressional area adjacent to Camp Creek. Excess storm water will be released via an emergency spillway designed to meet the 25-year storm event. The emergency spillway will be constructed near the north end of the structure to elevation 813.0 feet. Drainage tiles, if present, will be removed during construction of the structure. The pond will be 4.0 acres in size composed of deep-water pools (3 to 5 feet deep), and shallow water pools (0.5 to 1 foot deep). Maximum depth will be 5 feet below the inlet elevation of the primary spillway. Approximately 0.2 acre will be within the conservation easement and 3.8 acres will be outside of the easement. Slopes within the wetlands will be gradual and will be no steeper than 10(h) to 1(v). The edges of the planned wetland will be scalloped to provide longer and more natural-looking shoreline as well as greater edge habitat. Bottom elevations will vary to provide more diversity and to help insure wet conditions in at least some areas during dry periods. Approximately 0.3 acre of existing wetland will be temporarily impacted during construction of the berm. Of the 4.0-acre pond, 3.7 acres will be available for use as wetland mitigation.

(2) Vegetative Seedings. The structure will be seeded with Bromegrass and Alfalfa (0.8 acre). Natural revegetation of wetland plants from existing seed bank is expected to occur in the 4.0 acre pool area. A native prairie buffer strip will be seeded along the west edge of the pool. Indiangrass, Big Bluestem, Little Bluestem, Sideoats Grama, Purple Prairie Clover, Ox-Eye Sunflower, Black-Eyed Susan, Pale Purple Coneflower, and Grey-Headed Coneflower will be seeded. The buffer strip will be 50 feet wide and will total 1.5 acres. Non-native invasive species, such as Reed Canarygrass and Purple Loosestrife will be controlled.

(3) Maintenance and Monitoring. Inspections will be conducted on a quarterly basis by landfill staff. Annual monitoring will be conducted by a qualified individual for approximately five years. Annual reports will be submitted to the Corps and the Iowa Department of Natural Resources. Maintenance and repairs, including reseeding, will be performed as needed.

(4) Compensatory Mitigation Bank. The compensatory mitigation site will provide 1.3 acres of mitigation, at a 1 to 1 ratio, for the Phase 3 Borrow Area impacts. The remaining 2.4 acres of wetland creation/restoration will be banked for use as mitigation for future expansions of the Metro Park East Landfill. In addition, it is anticipated that 4 to 8 acres of wetland may be created down-gradient of the berm in the depressional area adjacent to Camp Creek. Any wetlands which establish below the berm will be delineated and added to the wetland mitigation bank.

## 5. Agency Review and Where to Reply.

a. Department of the Army, Corps of Engineers. The Department of the Army application is being processed under the provisions Section 404 of the Clean Water Act (33 U.S.C. 1344).

b. State of Iowa. The project plans have been submitted to the Iowa Department of Natural Resources for state certification of the proposed work in accordance with Section 401 of the Clean Water Act. The certification, if issued, will express the Department's opinion that the proposed activity will comply with Iowa's water quality standards (Chapter 61 IAC). The applicant has also applied for authorization of work in the floodplain pursuant to Chapter 455B of the Iowa Code and other applicable state permits. Written comments concerning possible impacts to waters of Iowa should be addressed to: Iowa Department of Natural Resources, 900 East Grand Avenue, Des Moines, Iowa 50319. A copy of the comments should be provided to the Corps of Engineers office (see paragraph 11. of this public notice for address).

## 6. Historical/Archaeological.

a. Phase 3 Borrow Area. The Corps consulted with the District geographic information systems (GIS) archeological site and survey databases current as of August 2003. The query determined that there were no previously recorded archeological sites in the permit area and that the area had already been surveyed (R&C#: 990177040). Based on the results of the archaeological investigation, the Corps has determined that no historic properties will be affected by issuance of this permit.

b. Wetland Mitigation Site. The Corps consulted with the District geographic information systems (GIS) archeological site and survey databases current as of May 2004. The query determined that the permit area has not been surveyed previously and that there are no previously recorded cultural resources documented within the permit area. The permit area has the potential to contain historic properties that may be potentially eligible for listing on the NRHP and will require the applicant to submit two (2) copies of a Phase I archaeological survey and geomorphological evaluation report covering the permit area and any associated equipment access and/or staging areas. The applicant, in addition to this Phase I report, may be required to conduct additional Phase II test excavations to evaluate sites for eligibility for inclusion in the NRHP as well as other studies, site avoidance, or data recovery as may be the case.

7. Endangered Species. District staff have performed a preliminary review of this application for the potential impact on threatened or endangered species pursuant to Section 7 of the Endangered Species Act as amended. Based upon the information provided and available at this time, our preliminary determination is that the proposed activity would have no effect on federally-listed endangered or threatened species or critical habitat. While no consultation has been initiated with the United States Fish and Wildlife Service (FWS) at this time, we are further coordinating this application with the FWS and the respective resource agencies through this public notice. Accordingly, our preliminary determination is subject to change should further information become available.

8. Dredge/Fill Material Guidelines. The evaluation of the impact of the proposed activity on the public interest will also include application of the guidelines promulgated by the Administrator of the United States Environmental Protection Agency under authority of Section 404(b) of the Clean Water Act (40 CFR Part 230).

9. Public Interest Review. The decision whether to issue the Corps permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

10. Who Should Reply. The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. These statements should be submitted on or before the expiration date specified at the top of page 1. These statements should bear upon the adequacy of plans and suitability of locations and should, if appropriate, suggest any changes considered desirable.

11. Public Hearing Requests. Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided.

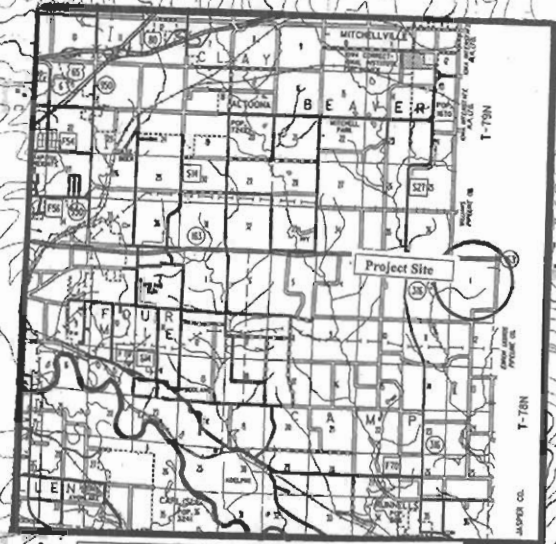
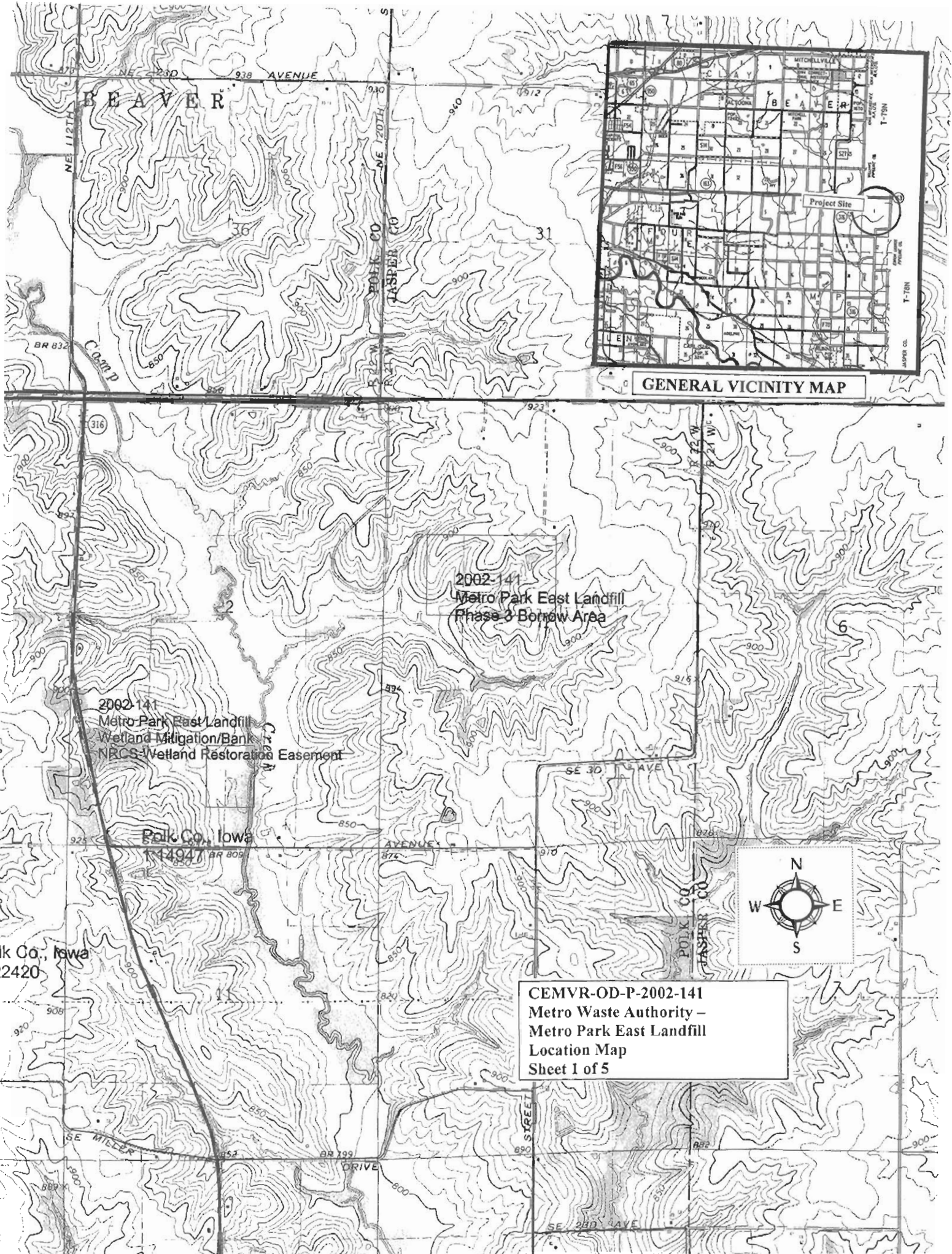
12. Reply to the Corps. Comments concerning the Corps permit should be addressed to the District Engineer, US Army Corps of Engineers, Rock Island District, ATTN: OD-P, Clock Tower Building - Post Office Box 2004, Rock Island, Illinois 61204-2004. **Mr. Marlyn W. Schafer (309/794-5377)** may be contacted for additional information (email: [marlyn.schafer@usace.army.mil](mailto:marlyn.schafer@usace.army.mil)).

Attach  
Plan

Marlyn W. Schafer  
Project Manager  
Regulatory Branch

REQUEST TO POSTMASTERS: Please post this notice conspicuously and continuously until the expiration date specified at the top of page 1.

NOTICE TO EDITORS: This notice is provided as background information for your use in formatting news stories. This notice is not a contract for classified display advertising. For more information call the Rock Island District Public Affairs Office, 309/794-5274.



GENERAL VICINITY MAP

2002-141  
Metro Park East Landfill  
Phase 3 Borrow Area

2002-141  
Metro Park East Landfill  
Wetland Mitigation/Bank  
NRCS Wetland Restoration Easement

Polk Co., Iowa  
14947



CEMVR-OD-P-2002-141  
Metro Waste Authority –  
Metro Park East Landfill  
Location Map  
Sheet 1 of 5



**SCALE**  
0 400 800 FT.  
Copyright © 2004 - State of Iowa Engineering Council  
E 14000 E 14200 E 14400 E 14600 E 14800 E 15000  
N 1000 N 1100 N 1200 N 1300 N 1400 N 1500 N 1600 N 1700 N 1800 N 1900 N 2000

- EXISTING WETLAND
- PROPOSED WETLAND
- EXISTING ROAD
- PROPOSED ROAD
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING UTILITY
- PROPOSED UTILITY
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING ADJACENT PROPERTY
- PROPOSED ADJACENT PROPERTY
- EXISTING SURVEY
- PROPOSED SURVEY
- EXISTING BOUNDARY
- PROPOSED BOUNDARY
- EXISTING CORNER
- PROPOSED CORNER
- EXISTING MONUMENT
- PROPOSED MONUMENT
- EXISTING PLAT
- PROPOSED PLAT
- EXISTING RECORD
- PROPOSED RECORD
- EXISTING DEED
- PROPOSED DEED
- EXISTING AGREEMENT
- PROPOSED AGREEMENT
- EXISTING ORDER
- PROPOSED ORDER
- EXISTING DECREE
- PROPOSED DECREE
- EXISTING JUDGMENT
- PROPOSED JUDGMENT
- EXISTING SETTLEMENT
- PROPOSED SETTLEMENT
- EXISTING RELEASE
- PROPOSED RELEASE
- EXISTING WAIVER
- PROPOSED WAIVER
- EXISTING ASSIGNMENT
- PROPOSED ASSIGNMENT
- EXISTING CONVEYANCE
- PROPOSED CONVEYANCE
- EXISTING INTEREST
- PROPOSED INTEREST
- EXISTING CLAIM
- PROPOSED CLAIM
- EXISTING DEFENSE
- PROPOSED DEFENSE
- EXISTING OBJECTION
- PROPOSED OBJECTION
- EXISTING MOTION
- PROPOSED MOTION
- EXISTING PETITION
- PROPOSED PETITION
- EXISTING COMPLAINT
- PROPOSED COMPLAINT
- EXISTING ANSWER
- PROPOSED ANSWER
- EXISTING CROSS-MOTION
- PROPOSED CROSS-MOTION
- EXISTING CROSS-PETITION
- PROPOSED CROSS-PETITION
- EXISTING CROSS-COMPLAINT
- PROPOSED CROSS-COMPLAINT
- EXISTING CROSS-ANSWER
- PROPOSED CROSS-ANSWER
- EXISTING CROSS-MOTION
- PROPOSED CROSS-MOTION
- EXISTING CROSS-PETITION
- PROPOSED CROSS-PETITION
- EXISTING CROSS-COMPLAINT
- PROPOSED CROSS-COMPLAINT
- EXISTING CROSS-ANSWER
- PROPOSED CROSS-ANSWER

NO.	NAME	ACRES	OWNER
1	1.00	1.00	STATE OF IOWA
2	2.00	2.00	STATE OF IOWA
3	3.00	3.00	STATE OF IOWA
4	4.00	4.00	STATE OF IOWA
5	5.00	5.00	STATE OF IOWA
6	6.00	6.00	STATE OF IOWA
7	7.00	7.00	STATE OF IOWA
8	8.00	8.00	STATE OF IOWA
9	9.00	9.00	STATE OF IOWA
10	10.00	10.00	STATE OF IOWA
11	11.00	11.00	STATE OF IOWA
12	12.00	12.00	STATE OF IOWA
13	13.00	13.00	STATE OF IOWA
14	14.00	14.00	STATE OF IOWA
15	15.00	15.00	STATE OF IOWA
16	16.00	16.00	STATE OF IOWA
17	17.00	17.00	STATE OF IOWA
18	18.00	18.00	STATE OF IOWA
19	19.00	19.00	STATE OF IOWA
20	20.00	20.00	STATE OF IOWA
21	21.00	21.00	STATE OF IOWA
22	22.00	22.00	STATE OF IOWA
23	23.00	23.00	STATE OF IOWA
24	24.00	24.00	STATE OF IOWA
25	25.00	25.00	STATE OF IOWA
26	26.00	26.00	STATE OF IOWA
27	27.00	27.00	STATE OF IOWA
28	28.00	28.00	STATE OF IOWA
29	29.00	29.00	STATE OF IOWA
30	30.00	30.00	STATE OF IOWA
31	31.00	31.00	STATE OF IOWA
32	32.00	32.00	STATE OF IOWA
33	33.00	33.00	STATE OF IOWA
34	34.00	34.00	STATE OF IOWA
35	35.00	35.00	STATE OF IOWA
36	36.00	36.00	STATE OF IOWA
37	37.00	37.00	STATE OF IOWA
38	38.00	38.00	STATE OF IOWA
39	39.00	39.00	STATE OF IOWA
40	40.00	40.00	STATE OF IOWA
41	41.00	41.00	STATE OF IOWA
42	42.00	42.00	STATE OF IOWA
43	43.00	43.00	STATE OF IOWA
44	44.00	44.00	STATE OF IOWA
45	45.00	45.00	STATE OF IOWA
46	46.00	46.00	STATE OF IOWA
47	47.00	47.00	STATE OF IOWA
48	48.00	48.00	STATE OF IOWA
49	49.00	49.00	STATE OF IOWA
50	50.00	50.00	STATE OF IOWA

NOTES:  
1. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
2. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
3. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
4. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
5. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
6. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
7. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
8. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
9. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
10. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
11. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
12. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
13. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
14. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
15. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
16. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
17. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
18. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
19. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
20. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
21. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
22. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
23. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
24. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
25. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
26. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
27. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
28. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
29. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
30. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
31. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
32. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
33. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
34. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
35. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
36. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
37. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
38. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
39. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
40. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
41. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
42. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
43. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
44. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
45. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
46. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
47. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
48. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
49. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.  
50. ALL SURVEYS AND RECORDS ARE TO BE KEPT IN THE OFFICE OF THE ENGINEER.



Metro Waste Authority

**BARKERLEMAR**  
ENGINEERING CONSULTANTS  
1001 Industrial Circle, West Des Moines, Iowa 50319  
Phone: 515.281.8004, Fax: 515.281.8005, www.barkerle.com

CEMVR-OD-P-2002-141  
Metro Waste Authority -  
Metro Park East Landfill  
Overall Site Plan  
Sheet 2 of 5

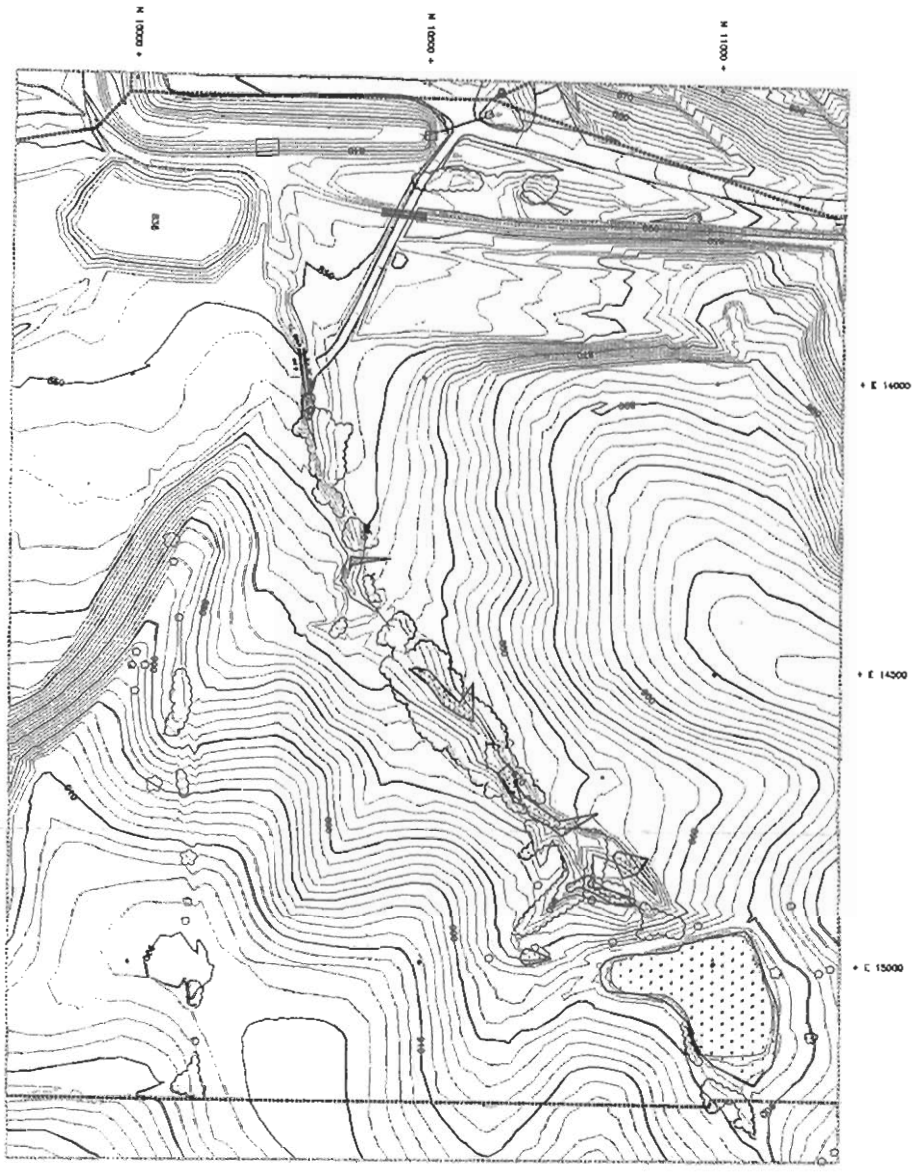
# EXISTING SITE MAP

METRO PARK EAST LANDFILL  
MITCHELLVILLE, IOWA  
PROJECT NO. METRO 03011  
DRAWING DATE: FEBRUARY, 2004

REVISION	DATE	DESCRIPTION
1	02/02/04	
2		
3		
4		

SHEET  
1





SCALE  
1" = 200 FT.  
Copyright © 2004 - Barker Leamer Engineering Consultants

LEGEND

- GROUND SURFACE CONTOUR
- WATER
- DESIGNATED WETLANDS
- PAVED ROADWAY
- GRAVEL ROADWAY
- TREE
- CLAYPIT
- PHASE 3 BORROW AREA
- WETLAND DELINEATION (BASED ON 08/26/03 SURVEY)

NOTES:  
BASED ON THE SURVEY PERFORMED BY BARKER LEAMER ON SEPTEMBER 26, 2003, THE AREA OF WETLAND IMPACTS WILL BE APPROXIMATELY 1.25 ACRES AND WILL BE OWNED BY ARMY CORPS OF ENGINEERS ON LEASE AGREEMENT.

REVISION	DATE	DESCRIPTION
1	200500	
2		
3		
4		



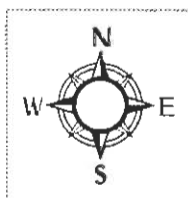
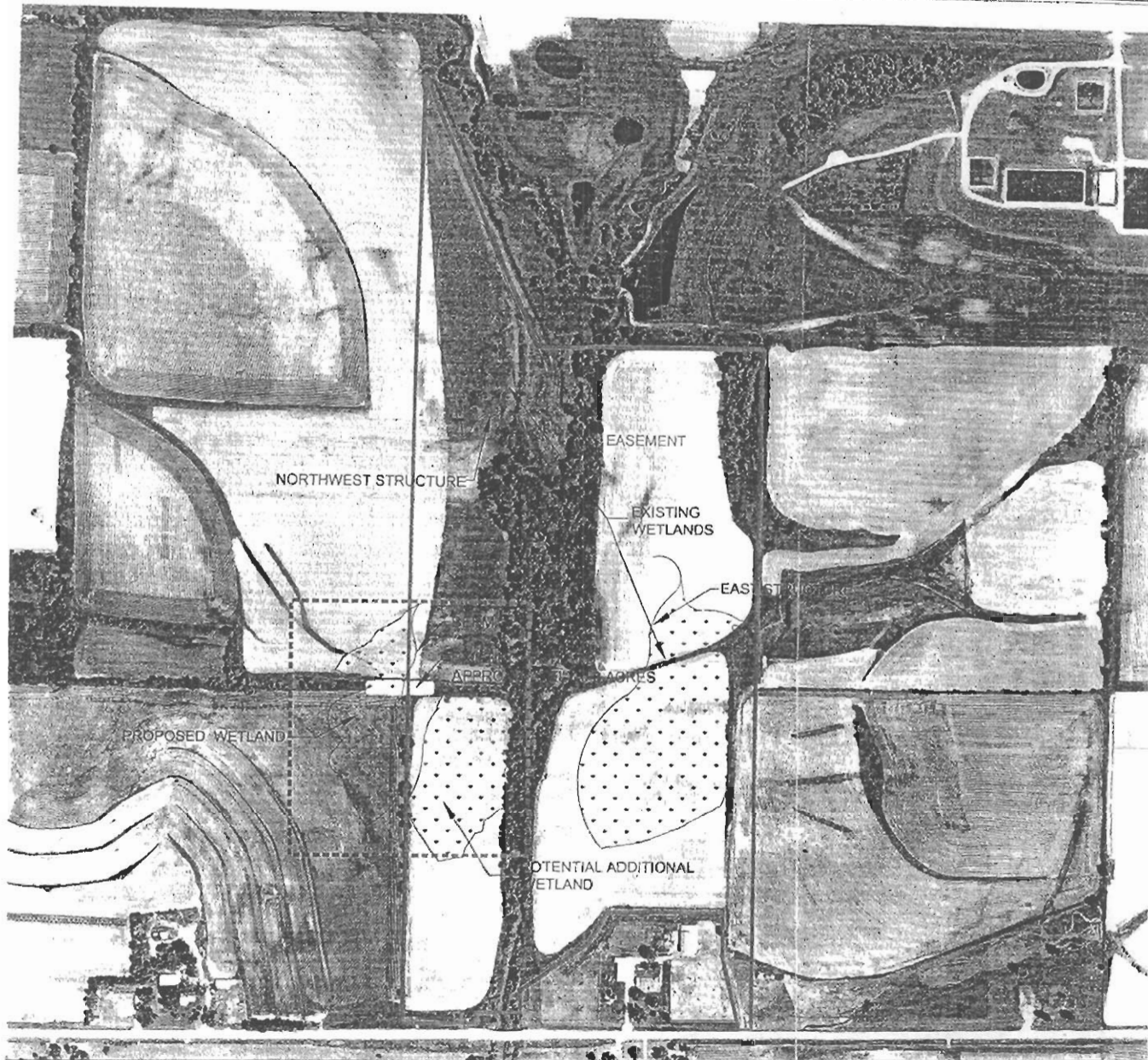
**BARKERLEAMER**  
ENGINEERING CONSULTANTS  
1500 Cambridge Road, Suite 201 - PM Island, Iowa - 50155  
Phone: 515.266.6144 - Fax: 515.266.6157 - www.barkerleamer.com

EXISTING WETLAND

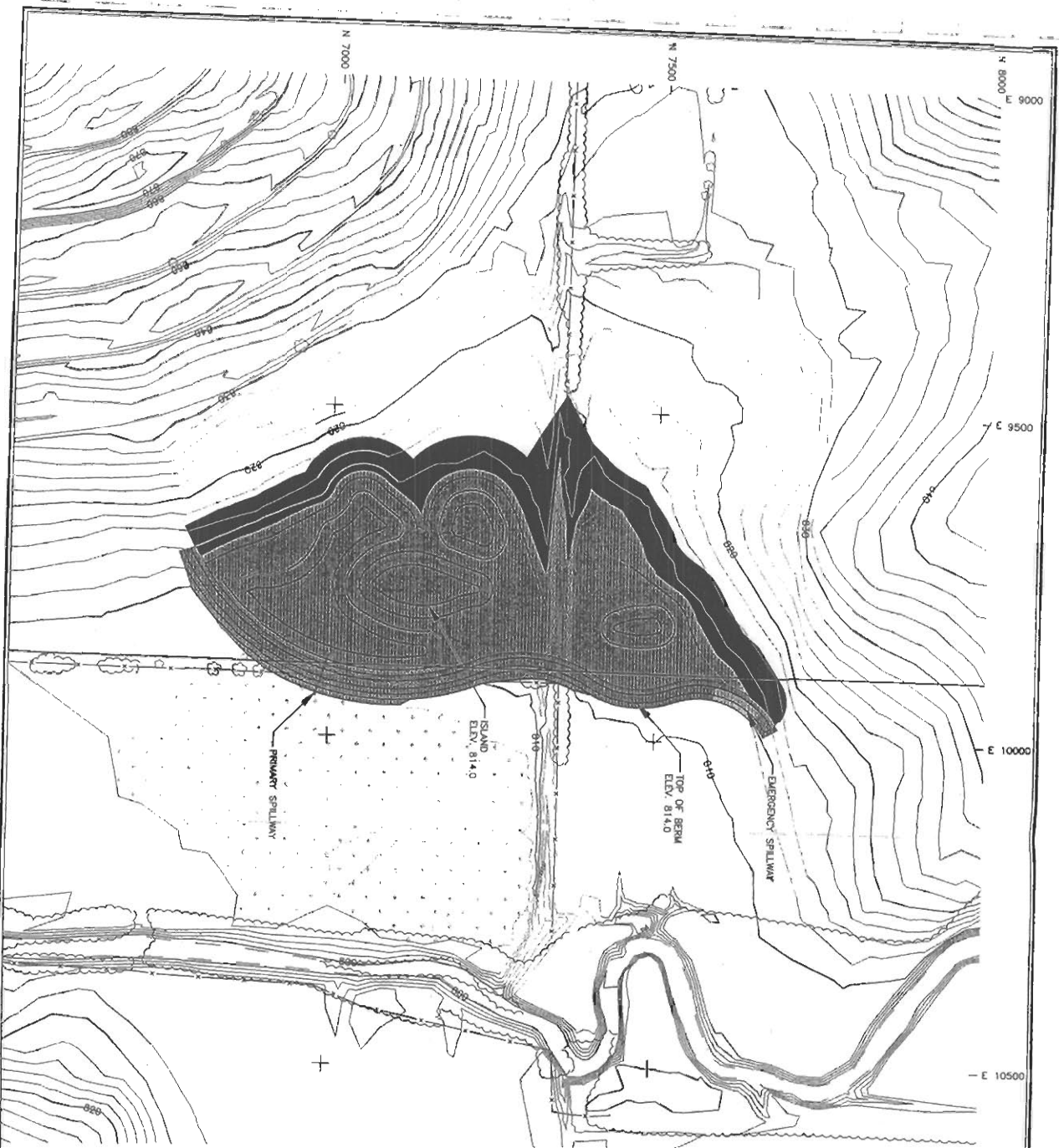
METRO PARKEAST LANDFILL  
MITCHELLVILLE, IOWA  
PROJECT NO. METRO 05011  
DRAWING DATE: MAY, 2005

SHEET  
2

CEMVR-OD-P-2002-141  
Metro Waste Authority -  
Metro Park East Landfill  
Delineated Wetland Map  
Sheet 3 of 5



CEMVR-OD-P-2002-141  
Metro Waste Authority –  
Metro Park East Landfill  
Compensatory Mitigation Site  
Sheet 4 of 5



- NOTES:
- DIKE (0.8 ACRES - COOL SEASON GRASSES)
  - POOL AT CREST (4.0 ACRES - NATURAL REVEGETATION)
  - PRAIRIE (1.5 ACRES - WARM SEASON GRASSES & FORBS)

- LEGEND
- EXISTING GROUND SURFACE
  - (2 FT. CONTOUR INTERVAL)
  - PROPOSED WETLAND SURFACE
  - (2 FT. CONTOUR INTERVAL)
  - PROPERTY LINE
  - FENCELINE
  - WATER STREAM
  - POTENTIAL ADDITIONAL WETLAND

SCALE  
0 25 50  
Feet  
Copyright © 2003 - Barker LeMar Engineering Consultants

CEMVR-OD-P-2002-141  
Metro Waste Authority -  
Metro Park East Landfill  
Mitigation Site Plan  
Sheet 5 of 5

**BARKERLEMAR**  
ENGINEERING CONSULTANTS  
1801 Industrial Circle, Suite 100  
P.O. Box 1000, Des Moines, IA 50319  
Phone: 515.281.1111 Fax: 515.281.1112 www.barkerleamar.com

SHEET  
5

**PROPOSED  
SEEDING PLAN**

METRO PARK EAST LANDFILL  
MITCHELLE, IOWA  
PROJECT NO. METRO 03011  
DRAWING DATE: JANUARY, 2004

REVISION	DATE	DESCRIPTION
1	02/05/04	
2		
3		
4		

